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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. |
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EXAMINER  
CUNEO, K

ART UNIT  
2841

PAPER NUMBER

DATE MAILED: 06/05/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

# Office Action Summary

Application No.

91237860

Applicant(s)

Examiner

Currell

Group Art Unit

2841

—The MAILING DATE of this communication appears on the cover sheet beneath the correspondence address—

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, such period shall, by default, expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

☒ Responsive to communication(s) filed on 4/12/01

☒ This action is **FINAL**.

- ☐ Since this application is in condition for allowance except for formal matters, **prosecution as to the merits is closed** in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

## Disposition of Claims

- ☒ Claim(s) 1,3-9 is/are pending in the application.
- ☐ Of the above claim(s) 3,4 is/are withdrawn from consideration.
- ☐ Claim(s) is/are allowed.
- ☒ Claim(s) 1,5-9 is/are rejected.
- ☐ Claim(s) is/are objected to.
- ☐ Claim(s) are subject to restriction or election requirement

## Application Papers

- ☒ The proposed drawing correction, filed on 4/12/01 is ☐ approved ☒ disapproved.
- ☒ The drawing(s) filed on 1/27/99 is/are objected to by the Examiner
- ☒ The specification is objected to by the Examiner.
- ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. § 119 (a)-(d)

☒ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119 (a)-(d).

☒ All ☐ Some\* ☐ None of the:

☒ Certified copies of the priority documents have been received.

☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_

☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a))

\*Certified copies not received: \_\_\_\_\_

## Attachment(s)

- ☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). \_\_\_\_\_
- ☐ Interview Summary, PTO-413
- ☐ Notice of Reference(s) Cited, PTO-892
- ☐ Notice of Informal Patent Application, PTO-152
- ☐ Notice of Draftsperson's Patent Drawing Review, PTO-948
- ☐ Other \_\_\_\_\_

Office Action Summary

## DETAILED ACTION

### *Drawings*

1. The drawings are objected to for the following reasons.

Figures 1, 10 and 16A-B are improperly cross hatched. All of the layers shown in section, and only those parts, must be cross hatched. The cross hatching patterns should be selected from those shown on page 600-84 of the MPEP based on the material of the part. See also 37 CFR 1.84(h)(3) and MPEP 608.02. Currently, all of the layers are cross hatched as metal.

In figure 8, section B-B' should be section 9-9 to correspond to figure 9. Correspondingly, the specification should be corrected. See also 37 CFR 1.84(h)(3).

The corrections submitted 4/12/01 are not entered because the deficiency with respect to the cross hatching is not overcome. Therefore, in the next set of corrections, *applicant should include all of the corrections submitted 4/12/01*, as well as the correction to the cross hatching.

Drawing corrections in compliance with MPEP 608.02(v) are required in response to this office action.

### *Specification*

2. The specification is objected to for not having legible page numbers.
3. The substitute specification submitted 4/12/01 is not entered because it is not in compliance with MPEP 608.01(q). The substitute specification must be accompanied by a marked-up copy showing all of the changes. Applicant has submitted the substitute specification with no changes and no marked-up copy and additionally submitted changes to the specification in the amendment of 4/12/01. The changes

made by the amendment of 4/12/01 have been incorporated into the original specification by the PTO.  
The substitute specification has not been entered.

***Treatment of Claims Based on Language and Format***

4. 35 USC 112, second paragraph, states:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 5-9 are rejected under 35 USC 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

The functional limitations of reducing self inductance or flowing currents or shielding of the claims are confusing, because it is unclear whether they follow from the already recited structure or whether they imply structural limitations not explicitly recited in the claim. That is, examiner is unclear whether applicant intends to only recite intended use, or whether applicant intends to somehow define the structure of the device through these functional recitations. Examiner assumes the former. If the latter is true, examiner is uncertain what structure applicant intends to claim. As such, the scope of the claim becomes indefinite. If applicant is only reciting intended use, upon clarification of the record, this rejection will be withdrawn.

Claim 1, the last two lines are indefinite, because it is unclear whether placement of the film within 150 micrometers of the wiring section and the film having the claimed resistance reduces the cross talk or whether some other element is required to perform this function. That is, it is unclear whether this function is inherent to the already recited structure or whether it implies structural limitations not explicitly recited in the claim. In other words, examiner is

unclear if applicant intends to somehow define the structure of the device through these functional recitations. Therefore, it is unclear what are the elements of the claim. As such, the scope of the claim is indefinite.

Claim 1, line 5, "a distance" should be "the distance" if the separation of the film and the conductors is being recited.

Claim 1, line 6, "a volume specific resistance" should be "the volume specific resistance."

Claim 5, last three lines, "flowing eddy current" is indefinite. The insulating layer does not perform any flowing function. By virtue of the proximity of the ground layer and leads, the currents flow.

Claim 6, line 2, "being formed on a ground layer" is unclear. Is the claim implying that the conductor is a ground layer?

Claim 7, line 2, states that the insulating material contains the adhesive. Nevertheless, what is defined as the insulating layer does not include the adhesive (see for example claim 8). Therefore, this description is confusing. Examiner suggests stating that the insulating layer bears an adhesive layer.

6. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

7. Claims 5-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled

in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 5 now recites leads, a plate-like ground layer and a conductor disposed on the leads. Such a configuration is not disclosed with respect to the elected invention (paper #8) of the circuit board. Further, the specification does not describe a plate-like ground layer, leads disposed on the insulation on that ground layer with a conductor disposed on the leads. Apart from the ground plane that is located over the leads, there is no additional conductor located on the leads. If this configuration pertains to the package (the semiconductor device in combination with the board), then the claims are drawn to a nonelected invention. Art is not applied to these claims.

8. Claims 5-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. See the above paragraph.

### *Treatment of Claims Based on Prior Art*

9. 35 USC 103(a) states:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Obviousness under 35 USC 103(a) is determined against a background established by the factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), which are summarized in items 1-4 below.

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 USC 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 USC 103© and potential 35 USC 102(f) or (g) prior art under 35 U.S.C. 103(a).

11. Claim 1 is rejected under 35 U.S.C. 103(a) as being unpatentable over Anderson (US 4441088).

Claim 1: Figure 1 shows a board with a plurality of leads or wiring section (12) on insulating material (14) and conductor or shielding film (16) on the leads. The distance between the wiring section and the film is 3.3 mils which is 83.8 micrometers, column 4, line 8. See also column 3 at lines 50-54 and column 4 at lines 55-70 which explain that the distance and other size parameters are chosen to minimize cross talk.

Anderson discloses the claimed invention except for the resistivity of the film. Anderson does not disclose what material is used for the film (or any of the conductors). Copper, silver, gold and aluminum are well known metals which are used to make conductive film and ground planes. The resistivity of these metals is about 30 microohm-cm or less. The present specification

also states at the bottom of page 12 that these metals are used for the formation of the claimed film.

Therefore, it would have been obvious to one of ordinary skill in the art, at the time the invention was made, to use copper (or silver or aluminum or gold) to provide the metal for the film of Anderson, because use of copper to make films is well known in the art. Examiner takes official notice of the commonness of copper for the formation of conductive films. Use of copper renders the claimed resistivity of 30 microhm-cm or less.

### ***Response to Arguments***

12. Applicant's arguments have been carefully reviewed.

The arguments with respect to the section 112 rejections are superfluous. The claims are indefinite because they are unclear. They are unclear because the examiner cannot determine what are all of the elements of the claim, explained in the rejections above. This means that the claims do not particularly point out and distinctly set forth the invention. So, they are rejected. The comments about alternative modes of expression are unrelated to the problems set forth in this office action.

With respect to claim 7, the specification identifies the insulating film and the adhesive layer as separate parts. For this reason and because the adhesive is not located within the film, it is incorrect to state that the adhesive layer is contained in the film.

Applicant's arguments with respect to the art rejections are moot in view of the new grounds of rejection necessitated by amendment. The arguments regarding Anderson state that this reference does not teach the claimed distance. This is incorrect. As pointed out in the rejection column 4 explicitly recites this distance.



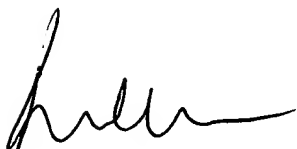
*Conclusion*

13. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

*Closing*

14. Any inquiries related to the examination of this application should be directed to Ex. K. Cuneo at (703) 308-1233 or her supervisor Ex. J Gaffin at (703) 308-3301. Inquiries of a general nature should be directed to the receptionist of Group 2800 at (703) 308-0956. The fax numbers for Group 2800 are (703) 305-7722 and 7724.



K. Cuneo  
Patent Examiner Group 2841  
May 29, 2001